



Volume 11, Issue 2

February 2008

This Year Can Be Different: Fitness Resolutions

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Remember that vow you made to yourself about a month ago? You know, the New Year's resolution? Like many, you probably said you were going to improve some aspect of your health and fitness. So, how is it going—are you sticking with it? If so, good for you! If not, you are not alone. Some sources estimate that nearly half the U.S. population makes this resolution at the start of the new year; however, about 75 percent fail to follow through to realize their goal. But if 75 percent fail, that means 25 percent succeed. The way you structure your resolution goals can dramatically increase your chances for long-term success. Making your goals SMART—Specific, Measurable, Attainable, Relevant, and Timely—can make all the difference. Yes, this year *can* be different. If you need help, this is the place. Let's walk through setting SMART goals step by step.

Specific

If you don't know where you are going, how will you know when you get there? A resolution to "lose some weight and get fit" is too general. Describe in detail what you would like to achieve, such as, "I will lose 10 pounds and run a 5K". Now we are getting somewhere—a few more steps and you are there!

Measurable

Now that your goal is specific, will you know when you have achieved it? Can you measure it? Yes. You can step on the scale and see if you have lost 10 pounds, and you can measure 5 kilometers. To make your chances for success even greater, you can measure your progress along the way by mapping out some mini-goals. Tracking daily and weekly mini-goals will ensure that you meet your ultimate goal. Sounds simple, right? Yes, but it is not necessarily easy, which leads us to the next step.

Attainable

If you are going to succeed, you need to choose a goal that you can actually achieve—a realistic goal. Picking a goal that is not realistic, like losing 20 pounds in 3 weeks, sets the stage for

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failure and discouragement. Losing up to 1-2 pounds per week is a more attainable goal—and challenging enough, anyway!

Relevant

It is important for your goal to support other aspects of your life that you feel are important. If your New Year's resolution fits well with other parts of your life, the positive feedback you get will fuel you on to achieve your ultimate goal!

Timely

To bring everything together, you need to decide on a deadline. A goal without a timeframe is nothing more than a wish. Develop a realistic timeframe for achieving your overall goal, as well as for the mini-goals along the way. Give yourself a realistic amount of time—not too little, not too much. Not allowing enough time is unrealistic, and allowing more time than you need may cause you to lose focus. Think about a time frame that fits *you* and *your* goal.

Using SMART goals can help you succeed and so can INShape Indiana! There are many Hoosiers, just like you, who are taking steps to improve their overall health. INShape Indiana offers easy access to many health promoting resources. Check out the Web site; you will be glad you did!



<http://www.in.gov/inshape/index.htm>

News from the Field.....

Disease Presentations Available

Stephanie English, MPH
ISDH Field Epidemiologist, District 6

To increase the capability to respond to disease outbreaks, the Indiana State Department of Health Surveillance and Investigation Division (SID) is developing several cross-training strategies. To ensure subject matter experts are available for assistance during an outbreak, the SID has paired the nine District field epidemiologists with the disease epidemiologists located in the central office in Indianapolis to provide cross-training in education on reportable communicable diseases. This teamwork has produced many benefits, including the development of training materials. PowerPoint presentations have been created for specific diseases, and the District field epidemiologists are available to provide counties throughout Indiana with educational presentations. (Eight presentations were provided in 2007.)

Disease presentations include:

Meningococcal meningitis
Meningitis 101
PHESS (syndromic surveillance)
Legionellosis
Rabies
Botulism
Viral hepatitis A-E
MRSA

The SID will continue to develop presentations during 2008. The goal is to develop educational materials for every reportable communicable disease and to ensure that all nine District field epidemiologists are cross-trained.

If you would like to host a presentation in your area, please contact your District field epidemiologist to schedule a date.



OUTBREAK SPOTLIGHT....

Outbreak Spotlight is a regularly occurring feature in the Indiana Epidemiology Newsletter to illustrate the importance of various aspects of an outbreak investigation. The event described below highlights an investigation of a viral foodborne outbreak .

Norovirus Outbreak Associated with Local Restaurant

Sandra Gorsuch, MS
ISDH Field Epidemiologist, District 5

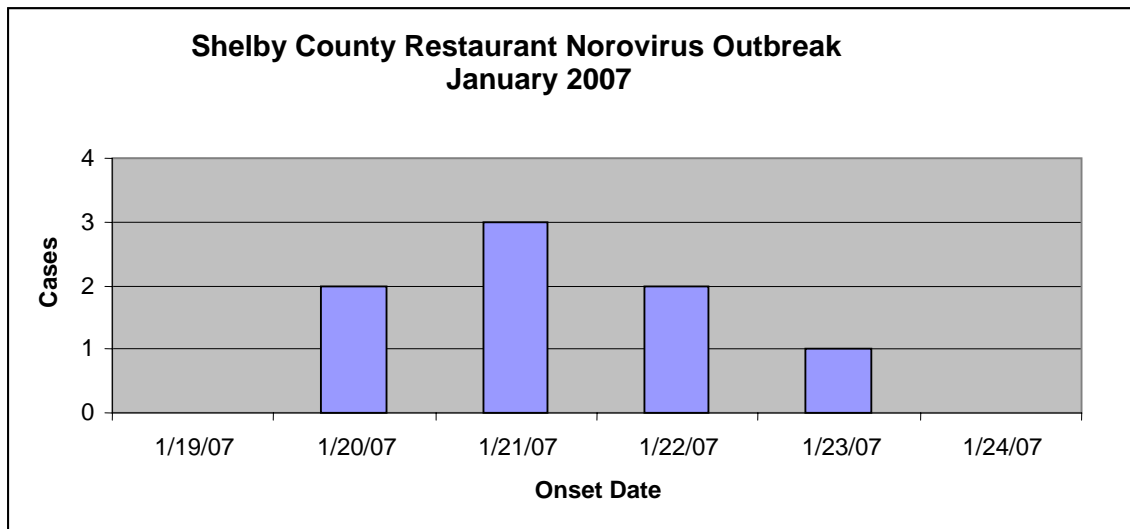
Background

On January 23, 2007, a representative of the Shelby County Health Department (SCHD) notified the Indiana State Department of Health (ISDH) that at least eight patrons who consumed food from a local restaurant developed acute gastroenteritis from January 20, 2007, through January 23, 2007.

Epidemiologic Investigation

The ISDH and the SCHD initiated a collaborative investigation to determine the cause of the outbreak and implement control measures to prevent further transmission of the illness. The ISDH developed a questionnaire to collect demographic information, as well as clinical and exposure histories of restaurant patrons and staff. A case was defined as any previously healthy person who consumed food at the restaurant or was epidemiologically linked to an individual who had consumed food at the restaurant and became ill with acute onset of vomiting or diarrhea on or after January 19, 2007. Eight individuals met the case definition (see Figure 1). None of the restaurant staff was reported as ill. The investigation revealed that eight patrons (100%) were experiencing nausea, vomiting, and diarrhea; five (62%) had low-grade fever. The median duration of the illness was 49 hours (range: 24 to 101 hours). The median incubation period was 16 hours (range: 8 to 44 hours). At least one person visited a hospital emergency department, but no one was hospitalized overnight. Four patrons submitted stool specimens to the ISDH Laboratories for analysis (see Laboratory Results).

Figure 1



The common food item eaten by seven of the eight ill patrons was salad (87%). There were no leftover food items available for analysis.

Environmental Assessment

On January 23, 2007, a SCHD representative visited the food establishment to observe food preparation practices and inquire about restaurant staff illness. Management reported that none of the restaurant staff was ill. The SCHD representative noted that one of the restaurant staff wiped tables with an unsanitized towel and subsequently prepared a salad without tongs and before washing hands or wearing gloves. The SCHD recommended disinfecting restaurant environmental surfaces with 1:10 chlorine bleach to water solution; thoroughly washing hands with warm water and soap for at least 20 seconds before, during, and after food preparation; and wearing gloves when preparing food. Restaurant management implemented these corrective measures on January 23, 2007, after discussion of observed violations. No food samples were available for laboratory analysis.

The SCHD conducted a routine food inspection on February 5, 2007, and identified five critical violations of the Indiana Retail Food Establishment Sanitation Requirements (410 IAC 7-24). Critical violations included:

- At 2:10 p.m., five pounds of sausage links were found cooling in the refrigerator at a temperature of 107°F. Employees stated that sausage had been placed in the cooling unit at 11:00 a.m.
- The sausage was stacked approximately 3" deep and was covered.
- Temperature of three hamburgers in hot holding was 127°F. (135°F is correct hot holding temperature.)
- Approximately five pounds of raw chicken was found on the same shelf next to trays of sliced ready-to-eat meat portions.
- No date-marking system was found in place for ready-to-eat potentially hazardous food held more than 24 hours, e.g., cooked meat, chili, and gravy base.

Except for the last violation, management implemented corrective measures on February 5, 2007, after the observed critical violations. The date-marking system for potentially hazardous ready-to-eat food was implemented on February 6, 2007.

Laboratory Results

Four patrons submitted stool specimens to the ISDH Laboratories for analysis. All specimens tested negative for *Salmonella*, *Shigella*, *Campylobacter*, and *E. coli* 0157:H7 by culture. All four specimens tested positive for *Norovirus* by reverse transcription-polymerase chain reaction (RT-PCR).

Conclusions

The investigation confirmed that an outbreak of viral gastroenteritis occurred at the Shelby County restaurant from January 20, 2007, through January 23, 2007. Eight cases, all restaurant patrons, were identified. The pattern of illness and closely-timed onset dates indicated a point source rather than person-to-person transmission. The one common reported exposure among all the cases was consuming food from the restaurant.

The causative agent of this outbreak was *Norovirus*. Four patrons tested positive and four additional patrons had characteristic *Norovirus* symptoms. The sudden, acute predominant signs and symptoms (vomiting, diarrhea, and nausea) and duration of symptoms (approximately 49 hours) reported in this investigation are typical of *Norovirus* outbreaks. *Norovirus* is characterized primarily by abrupt onset of nausea, vomiting and/or diarrhea, headache, body aches, chills, but little or no fever.¹ The incubation period for *Norovirus* is 24-48 hours. Illness usually resolves on its own within 1-2 days without complications. Dehydration may result after prolonged vomiting and diarrhea, particularly in young children, the elderly, and those with weakened immune systems. *Norovirus* infections typically occur during cooler months of the year (October to April) but can occur year-round.

Norovirus is thought to be responsible for 50 percent of all foodborne gastroenteritis outbreaks.² The mode of transmission is fecal-oral, and persons are infected by contaminated food or water, through close contact with an infected person, or contact with contaminated environmental surfaces and fomites. Because studies indicate *Norovirus* can become aerosolized during the cleaning process of infected vomitus and stool, it is recommended a mask be worn for protection while cleaning restrooms, vomitus, or stool. *Norovirus*, which is shed in stool, is highly

contagious, and an infectious dose can be as little as 100 viral particles.¹ Persons with *Norovirus* usually become infectious when symptoms begin and can continue to shed virus in their stool for up to 2 weeks after symptoms cease. Up to 30 percent of individuals infected with *Norovirus* are asymptomatic. *Norovirus* survives chlorine up to 10 ppm (above levels recommended for swimming pools and public water systems)¹ and temperatures below 32°F and up to 140°F. Although the virus does not multiply outside the human body, it can survive on environmental surfaces for 24-48 hours.

Foodborne outbreaks of *Norovirus* occur when food is contaminated by an infected food handler immediately before its consumption. Outbreaks have frequently been associated with consumption of ready-to-eat foods, including various salads, sandwiches, and bakery products. Semi-liquid items (e.g., salad dressing or cake icing) that allow virus to mix evenly are often implicated as a cause of outbreaks.²

No food specimens were obtained for laboratory analysis; however, 87 percent of the ill patrons reported eating salad. The SCHD representative observed unwashed, bare-hand salad preparation suggesting a possible route of contamination.

Recommendations

Most *Norovirus* outbreaks can be prevented by the following practices:

- Practice good hygiene:
 - Thoroughly wash hands with soap and water after using the restroom; after changing diapers; after assisting someone with diarrhea and/or vomiting; after swimming; and before, during, and after food preparation.
 - Clean food preparation work surfaces, equipment, and utensils with soap and water before, during, and after food preparation.
- Eat safe foods and drink safe water (Remember: Contaminated foods may look and smell normal):
 - Wash all produce before eating raw or cooking.
 - Use treated water for washing, cooking, and drinking.
- Protect others:
 - Persons with diarrhea and/or vomiting should not prepare food or provide health care for others and should limit direct contact with others as much as possible.
 - Persons with diarrhea and/or vomiting should not attend a child-care facility or school.
 - Persons with diarrhea and/or vomiting shall be excluded from employment involving food handling (Indiana Retail Food Establishment Sanitation Requirements, 410 IAC 7-24-122).
 - Do not change diapers near recreational water.
 - Do not go swimming or use hot tubs if you have diarrhea and for at least two weeks after diarrhea stops.

The Indiana State Department of Health extends its appreciation to the Shelby County Health Department for their quick response and professionalism. Their prompt and appropriate actions were instrumental in ending this outbreak.

References

1. "Norwalk-Like Viruses" Public Health Consequences and Outbreak Management. Centers for Disease Control and Prevention. *MMWR*, June 1, 2001 50(9); 1-17.
2. *Norovirus*: Technical Fact Sheet. August 3, 2006. Centers for Disease Control and Prevention Web site, <http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus-factsheet.htm>.



Descriptive Epi

Descriptive Epi is a new feature in the Indiana Epidemiology Newsletter to highlight epidemiologists and those practicing epidemiology in Indiana. If you are aware of anyone deserving recognition, please contact the Epi newsletter staff at epinewsletter@isdh.IN.gov.

Name: Stephanie English

Position: District 6 Field Epidemiologist

Education: B.S. from Indiana University, MPH from University of Texas-Houston Health Science Center

How did you get started in public health?

I got started in public health in college. A good friend of mine asked me to take a class with him, and I fell in love with the field.



What is the most rewarding part of your job?

The most rewarding part of my job is knowing that I have a positive impact on the community through my public health initiatives.

What is a typical day like for you?

I have a lot of contact with the public health nurses at the local health departments or nurses at the schools. I have access to PHESS so I can look at District 6's rates to determine if there might be early signs of an outbreak in the community. I travel and attend meetings.

What is your ideal vacation?

My ideal vacation is anywhere that has a sandy beach and sun. I don't particularly like the sand because it is messy and gets everywhere, but I love to watch my four children playing in it, making sand castles with moats, and burying each other.

Favorite hobby?

My favorite hobby is camping and boating. My family and I spend most of the summer participating in these activities and they create great memories for us to share throughout the winter.

E³ Easy Epidemiology for Everyone

E³ is a new feature of the Indiana Epidemiology Newsletter dedicated to exploring the fundamentals of epidemiology. Each month, a different epidemiology concept will be explored to enhance understanding of basic epidemiology.

Methods of Investigation

In previous articles, we have talked about surveillance and descriptive epidemiology, so what happens when there is an “outbreak”? An outbreak would best be defined as more cases of disease in a given population at a given time than expected. For example, we expect to see a lot of influenza cases in February, especially in those with weakened or compromised immune systems. On the other hand, we do not expect to see many cases of influenza in July and August. If we did, we would call it an outbreak.

In an outbreak, an epidemiologist is going to begin by asking questions and gathering data about the people that are becoming ill (e.g., are they all elderly, are they all young). Epidemiologists also gather information about where these people live or where they were exposed to the illness (e.g., a restaurant or other common gathering place). Finally, epidemiologists gather information about what time these events occurred (e.g., how long were people ill, what time were they exposed, when did their first symptoms appear).

Once information is gathered, there are three types or methods of investigation that can assist in determining the cause of the illness and then control measures can be implemented to prevent others from becoming ill.

One of the most utilized methods that you have probably heard the most about is a Case Control study. A Case Control study is utilized when the population in which an outbreak occurs is so large that it is not possible to interview everyone. An example is the recent salmonella in peanut butter, where a large number (hundreds of thousands or millions) were possibly exposed, making it impossible to interview everyone. In a Case Control study, epidemiologists interview cases, (people who are ill with the disease of interest) as well as controls (those who are not ill, but may have been exposed). Epidemiologists then compare the two groups to determine if there is an exposure that the cases had and the controls may not have had. Using the peanut butter example: Those who ate the peanut butter became ill. Those who did not eat the peanut butter did not become ill. When epidemiologists compared the two groups, the peanut butter stood out.

Another common study design is the Cohort Study. A cohort is a group of people. This could be a prospective cohort that is exposed and then followed over time to determine if they develop

illness. This would be a prospective study because the cohort is followed into the future. There is also a retrospective cohort. The retrospective study involves a cohort that is already ill. Epidemiologists work backward to determine the exposure that made the group of people ill. One of the most famous ongoing cohort studies is the Framingham, Massachusetts, heart study. This study, begun in 1948 with more than 5,000 people enrolled, has led to the identification of major risk factors for heart disease including high blood pressure and high cholesterol.

The last method of investigation is a Cross-sectional Study. A Cross-sectional Study is not used frequently, but it is most useful when the illness does not involve a large number of people. This gives a “snapshot” of the situation at one period in time. A Cross-sectional Study compares the presence or absence of disease and the presence or absence of the variables that could potentially cause illness.

Each of these methods of investigation will be explored individually in upcoming issues.

Next Month: Cohort Studies



Training Room

INDIANA STATE DEPARTMENT OF HEALTH IMMUNIZATION PROGRAM PRESENTS:

Immunizations from A to Z

Immunization Health Educators offer this FREE, one-day educational course that includes:

- Principles of Vaccination
- Childhood and Adolescent Vaccine-Preventable Diseases
- Adult Immunizations
 - Pandemic Influenza
- General Recommendations on Immunization
 - Timing and Spacing
 - Indiana Immunization Requirements
 - Administration Recommendations
 - Contraindications and Precautions to Vaccination
- Safe and Effective Vaccine Administration
- Vaccine Storage and Handling
- Vaccine Misconceptions
- Reliable Resources

This course is designed for all immunization providers and staff. Training manual, materials, and certificate of attendance are provided to all attendees. Please see the Training Calendar for presentations throughout Indiana. Registration is required. To attend, schedule/host a course in your area or for more information, please reference

<http://www.IN.gov/isdh/programs/immunization.htm>.

ISDH Data Reports Available

The following data reports and the *Indiana Epidemiology Newsletter* are available on the ISDH Web Page:

http://www.IN.gov/isdh/dataandstats/data_and_statistics.htm

HIV/STD Quarterly Reports (1998-June 2006)	Indiana Mortality Report (1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Cancer Incidence Report (1990, 1995, 1996, 1997, 1998)	Indiana Infant Mortality Report (1999, 2002, 1990-2003)
Indiana Cancer Mortality Report (1990-1994, 1992-1996)	Indiana Natality Report (1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)
Combined Cancer Mortality and Incidence in Indiana Report (1999, 2000, 2001, 2002, 2003, 2004)	Indiana Induced Termination of Pregnancy Report (1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Health Behavior Risk Factors (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)	Indiana Marriage Report (1995, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004)
Indiana Health Behavior Risk Factors (BRFSS) Newsletter (9/2003, 10/2003, 6/2004, 9/2004, 4/2005, 7/2005, 12/2005, 1/2006, 8/2006, 10/2006, 5/2007, 12/2007)	Indiana Infectious Disease Report (1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Hospital Consumer Guide (1996)	Indiana Maternal & Child Health Outcomes & Performance Measures (1990-1999, 1991-2000, 1992-2001, 1993-2002, 1994-2003, 1995-2004)
Public Hospital Discharge Data (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)	Assessment of Statewide Health Needs – 2007

HIV Disease Summary

Information as of January 31, 2008 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

383	New HIV cases from February 2007 thru January 31, 2008	12-month incidence	6.66 cases/100,000
3,849	Total HIV-positive, alive and without AIDS on January 31, 2008	Point prevalence	66.92 cases/100,000

AIDS cases to date:

362	New AIDS cases from February 2007 thru January 31, 2008	12-month incidence	6.29 cases/100,000
4,182	Total AIDS cases, alive on January 31, 2008	Point prevalence	72.71 cases/100,000
8,511	Total AIDS cases, cumulative (alive and dead) on January 31, 2008		

REPORTED CASES

 of selected notifiable diseases

Disease	Cases Reported in January MMWR Weeks 1-4			
	2007	2008		
Aseptic Meningitis	2	14		
Campylobacteriosis	5	10		
Chlamydia	1,687	1,352		
Cryptococcus	1	1		
Cryptosporidiosis	0	6		
<i>E. coli</i> , shiga toxin-producing	0	2		
<i>Haemophilus influenzae</i> , invasive	2	2		
Hemolytic Uremic Syndrome (HUS)	0	0		
Hepatitis A	0	0		
Hepatitis B	0	0		
Histoplasmosis	3	0		
Influenza Deaths (all ages)	Not Reportable	0		
Gonorrhea	729	606		
Legionellosis	2	0		
Listeriosis	0	0		
Lyme Disease	1	0		
Measles	0	0		
Meningococcal, invasive	1	1		
Mumps	0	0		
Pertussis	0	1		
Rocky Mountain Spotted Fever	0	0		
Salmonellosis	2	21		
Shigellosis	5	72		

REPORTED CASES of selected notifiable diseases (cont.)

Disease	Cases Reported in January MMWR Weeks 1- 4			
	2007	2008		
Group A Streptococcus, invasive	4	9		
Group B Streptococcus, Newborn	0	2		
Group B, Streptococcus, invasive	10	16		
<i>Streptococcus pneumoniae</i> (invasive, all ages)	35	69		
<i>Streptococcus pneumoniae</i> (invasive, drug resistant)	15	14		
<i>Streptococcus pneumoniae</i> (invasive, <5 years of age)	2	3		
Syphilis (Primary and Secondary)	2	5		
Tuberculosis	8	10		
Yersiniosis	0	1		
Animal Rabies	0	0		

For information on reporting of communicable diseases in Indiana, call the *Surveillance and Investigation Division* at 317.233.7125.



The *Indiana Epidemiology Newsletter* is published monthly by the Indiana State Department of Health to provide epidemiologic information to Indiana health care professionals, public health officials, and communities.

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